

What is Claimed is:

1. An interactive television program guide system that allows a user to watch one television program while simultaneously recording another television program, comprising:

a recording device for recording television programs;

a viewing device for displaying television programs for the user to watch; and

user program guide equipment on which an interactive television program guide is implemented, wherein the user program guide equipment receives a television input signal, wherein the user program guide equipment is coupled to the recording device and the viewing device, wherein the interactive television program guide controls the operation of the user program guide equipment so that one television program is displayed on the viewing device while another television program is being recorded by the recording device.

2. The interactive television program guide system defined in claim 1 wherein the user program guide equipment comprises a set-top box on which the interactive television program guide is implemented.

3. The interactive television program guide system defined in claim 1 wherein the user program guide equipment comprises a television having a processor with memory on which the interactive television program guide is implemented.

4. The interactive television program guide system defined in claim 1 wherein the user program guide

equipment comprises in a computer on which the interactive television program guide is implemented.

5. The interactive television program guide system defined in claim 1 wherein the user program guide equipment is configured to receive the television input signal from a cable system.

6. The interactive television program guide system defined in claim 1 wherein the user program guide equipment is configured to receive the television input signal from a satellite system.

7. The interactive television program guide system defined in claim 1 wherein the user program guide equipment is configured to receive the television input signal received from a microwave system.

8. The interactive television program guide system defined in claim 1 wherein the user program guide equipment is configured to receive the television input signal received from a broadcast television system.

9. The interactive television program guide system defined in claim 1 wherein the user program guide equipment is configured to receive the television input signal received from a combination of cable, satellite, microwave, and broadcast television systems.

10. The interactive television program guide system defined in claim 1 wherein the television input signal is analog.

11. The interactive television program guide system defined in claim 1 wherein the television input signal is digital.

12. The interactive television program guide system defined in claim 1 wherein the television input signal is a combination of analog and digital signals.

13. The interactive television program guide system defined in claim 1 wherein the user program guide equipment includes tuner resources and wherein the interactive television program guide allocates tuner resources based on an assumption that a user is currently viewing a selected television program.

14. The interactive television program guide system defined in claim 13 wherein the assumption is based on the user selecting a program and wherein the interactive television program guide provides the user with an opportunity to select a television program for viewing.

15. The interactive television program guide system defined in claim 13 wherein the assumption is based on the user selecting the watch option and wherein the opportunity to view a television program includes the ability to select a watch option for the selected television program.

16. The interactive television program guide system defined in claim 13 wherein the assumption is based on the user setting a reminder and wherein the interactive television program guide provides the user with an opportunity to set a reminder for a selected television program.

17. The interactive television program guide system defined in claim 13 wherein the assumption is based on the user directing the interactive television program guide to tune to the channel showing the selected television program and wherein the interactive television program guide provides the user with an opportunity to direct the interactive program guide to tune to the channel showing a selected television program.

18. The interactive television program guide system defined in claim 13 wherein the assumption is based on the user selecting at least one interactive television program guide feature and wherein the interactive television program guide provides the user with the user with an opportunity to select the interactive television program guide feature.

19. The interactive television program guide system defined in claim 1 wherein the user program guide equipment includes tuner resources and wherein the interactive television program guide allocates tuner resources based on the assumption that the user always desires to view a television program.

20. The interactive television program guide system defined in claim 1 wherein the interactive television program guide provides the user with an opportunity to select a television program for recording.

21. The interactive television program guide system defined in claim 20 wherein the opportunity to record a television program is provided by an interactive television program guide display on the viewing device that

allows the user to select a television program to be recorded.

22. The interactive television program guide system defined in claim 20 further comprising a remote control device and wherein the user selects the television program to be recorded by pressing a key on the remote control device.

23. The interactive television program guide system defined in claim 20 wherein the television program selected is currently being broadcast.

24. The interactive television program guide system defined in claim 20 wherein the television program selected is scheduled to be broadcast in the future.

25. The interactive television program guide system defined in claim 20 wherein the interactive television program guide sends commands to the recording device that direct the recording device to begin recording when the television program selected is scheduled to begin.

26. The interactive television program guide system defined in claim 20 wherein the interactive television program guide sends commands to the recording device to stop recording when the television program selected is scheduled to end.

27. The interactive television program guide system defined in claim 1 wherein the viewing device is a television.

28. The interactive television program guide system defined in claim 27 wherein the viewing device is an analog television.

29. The interactive television program guide system defined in claim 27 wherein the viewing device is a digital television.

30. The interactive television program guide system defined in claim 1 wherein the viewing device is a monitor.

31. The interactive television program guide system defined in claim 30 further comprising a computer, wherein the viewing device is a monitor connected to the computer.

32. The interactive television program guide system defined in claim 1 wherein the recording device is a videocassette recorder.

33. The interactive television program guide system defined in claim 1 wherein the recording device is a digital versatile disc recorder.

34. The interactive television program guide system defined in claim 1 wherein the recording device is a disk drive.

35. The interactive television program guide system defined in claim 1 wherein the user program guide equipment, viewing device and recording device include a plurality of tuners, and wherein the interactive television program guide allocates the plurality of tuners based on

signal switching options, tuner capabilities and tuner functions performed by the tuner.

36. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include tuning to television programming provided in the television input signal for display on the viewing device.

37. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include tuning to television programming provided in the television input signal for recording on the recording device.

38. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include collecting background data.

39. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include Internet browsing.

40. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include playing a particular music channel using the user television equipment.

41. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include using interactive services.

42. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include handling user requests.

43. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include functions that are initiated automatically by the interactive television program guide.

44. The interactive television program guide system defined in claim 35 wherein the tuner functions to be performed by the tuner include handling a current user request that requires one of the plurality tuners so that the interactive television program guide allocates that tuner for handling the current user request.

45. The interactive television program guide system defined in claim 35 wherein when only two of the plurality of tuners are available to be allocated by the interactive television program guide and wherein when one of the two tuners is busy handling prior requests the interactive television program guide allocates a non-busy tuner for handling current user requests.

46. The interactive television program guide system defined in claim 35 wherein the plurality of available tuners capable of handling a given user request, wherein at least one of the tuners is less capable than the others, wherein the interactive television program guide allocates the tuner that is less capable for handling the given user request.



47. The interactive television program guide system defined in claim 35 wherein the plurality of available tuners to handle user requests, wherein the interactive television program guide allocates one of these tuners based on anticipated future requests.

48. The interactive television program guide system defined in claim 35 wherein the plurality of available tuners to handle user requests, wherein the interactive television program guide allocates one of these tuners based on the type of user request to be processed.

49. The interactive television program guide system defined in claim 35 wherein the plurality of available tuners, wherein when the tuners are unavailable to handle a current user request because prior requests are being handled, the interactive television program guide leaves the current user request unfulfilled.

50. The interactive television program guide system defined in claim 49 wherein the prior requests have a higher priority than the current user request.

51. The interactive television program guide system defined in claim 35 wherein when the plurality of tuners are unavailable to handle a current user request, the interactive television program guide will cancel a prior request being handled on a requested tuner and handle the current user request.

52. The interactive television program guide system defined in claim 51 wherein the prior request has a lower priority than the current user request.

53. The interactive television program guide system defined in claim 51 wherein the prior request is automatically initiated by the interactive television program guide.

54. The interactive television program guide system defined in claim 53 wherein the prior request is a request to perform a background process.

55. The interactive television program guide system defined in claim 53 wherein the prior request is a request to perform background data collection.

56. The interactive television program guide system defined in claim 35 wherein when the plurality of tuners are unavailable to handle a current user request because the tuners are busy handling prior requests, the interactive television program guide provides the user with an option to cancel at least one of the prior requests and handle the current user request instead or to cancel the current user request and continue handling all of the prior requests.

57. The interactive television program guide system defined in claim 56 wherein the option is displayed on a viewing device.

58. The interactive television program guide system defined in claim 56 wherein the option is displayed on the viewing device and combined with video data.

59. The interactive television program guide system defined in claim 56 wherein the option to cancel either one of the prior requests or the current user

request is not responded to by the user, the interactive television program guide cancels one of the prior requests that involved providing the user with television programming for display on the viewing device and then handles the current user request.

60. The interactive television program guide system defined in claim 56 wherein the prior request is a secondary function request and the current user request is a record request.

61. The interactive television program guide system defined in claim 56 wherein the prior request is a record request and the current user request is a secondary function request.

62. The interactive television program guide system defined in claim 56 wherein at least one of the prior request and current user request includes recording a television program.

63. The interactive television program guide system defined in claim 56 wherein at least one of the prior request and current user request includes requests for displaying a second video image.

64. The interactive television program guide system defined in claim 56 wherein at least one of the prior request and current user request includes requests for Internet browsing capability.

65. The interactive television program guide system defined in claim 56 wherein at least one of the

prior request and current user request includes requests for playing a music channel.

66. The interactive television program guide system defined in claim 56 wherein at least one of the prior request and current user request includes requests for interactive services capability.

67. The interactive television program guide system defined in claim 35 wherein when the plurality of tuners are unavailable to handle a current user request because the plurality of tuners are busy handling prior requests, the interactive television program guide provides the user with reduced interactive television program guide capabilities.

68. The interactive television program guide system defined in claim 67 wherein the reduced program guide capabilities include graphics displays instead of video displays.

69. The interactive television program guide system defined in claim 67 wherein the reduced program guide capabilities include text displays instead of video displays.

70. The interactive television program guide system defined in claim 1 the user program guide equipment further comprises at least one tuner, wherein the television input signal corresponds to a raw signal, and wherein at least one tuner processes the television input signal and provides a corresponding processed signal; and a switch with the ability to route either the raw signal or the processed signal to at least one switch output.

71. The interactive television program guide system defined in claim 70 wherein the switch is controlled by the interactive television program guide.

72. The interactive television program guide system defined in claim 70 wherein the raw signal is a Radio-Frequency signal.

73. The interactive television program guide system defined in claim 70 wherein the raw signal is a digital signal.

74. The interactive television program guide system defined in claim 70 wherein the processed signal is routed to the recording device and to the switch and wherein the switch routes either the raw or processed signal to the viewing device.

75. The interactive television program guide system defined in claim 70 wherein the processed signal is routed to the viewing device and to the switch and the raw signal is routed to the switch and wherein the switch routes either the raw or processed signal to the recording device.

76. The interactive television program guide system defined in claim 70 wherein the switch has a first switching position and a second switching position and wherein when the switch is in the first switching position the raw signal is routed to the recording device and the processed signal is routed to the viewing device and when the switch is in the second switching position the raw signal is routed to the viewing device and the processed signal is routed to the recording device.

77. The interactive television program guide system defined in claim 70 wherein the switch has a first switching position, a second switching position, and a third switching position and wherein when the switch is in the first switching position the raw signal is routed to the recording device and the processed signal is routed to the viewing device and when the switch is in the second switching position provides that the raw signal is routed to the viewing device and the processed signal is routed to the recording device and when the switch is in the third switching position provides that the processed signal is routed to both the recording device and the viewing device.

78. The interactive television program guide system defined in claim 1 wherein the viewing device has a viewing device tuner and wherein the interactive television program guide controls the viewing device tuner.

79. The interactive television program guide system defined in claim 78 wherein the television input signal corresponds to a raw signal and the viewing device tuner receives the raw signal, and wherein when the viewing device tuner is unable to decode a user-requested television program from the raw signal the interactive television program guide routes a processed signal to the viewing device.

80. The interactive television program guide system defined in claim 78 wherein the interactive television program guide provides the user with a subset of otherwise available interactive television program guide capabilities.

81. The interactive television program guide system defined in claim 80 wherein the subset of the interactive television program guide capabilities includes the capability for the interactive television program guide to ignore user commands that otherwise cause a program guide display to be displayed on the viewing device.

82. The interactive television program guide system defined in claim 80 wherein the interactive television program guide sends commands to the viewing device.

83. The interactive television program guide system defined in claim 82 further comprising an infrared transmitter wherein the infrared transmitter transmits the commands to the viewing device as infrared signals.

84. The interactive television program guide system defined in claim 82 further comprising a serial bus wherein the commands to the viewing device are sent via the serial bus.

85. The interactive television program guide system defined in claim 80 wherein the subset of the interactive program guide capabilities includes a capability to change channels.

86. The interactive television program guide system defined in claim 85 wherein the capability to change channels includes a capability to accept digit entry to select a particular channel.

87. The interactive television program guide system defined in claim 85 wherein the capability to change

channels includes the capability to change channels in ascending and descending order.

88. The interactive television program guide system defined in claim 85 wherein the capability to change channels includes the capability to retrieve last-viewed-channel.

89. The interactive television program guide system defined in claim 85 wherein the capability to change channels includes the capability to retrieve previously set favorite channels.

90. The interactive television program guide system defined in claim 85 wherein the user program guide equipment having a numeric display and wherein the capability to change channels includes the capability to display a channel to which the viewing device is currently tuned on the numeric display of the user program guide equipment.

91. The interactive television program guide system defined in claim 85 wherein the user program guide equipment having a numeric display and wherein the capability to change channels includes the capability to display a channel number, provided to the interactive television program guide by the user when selecting a television program, on the numeric display of the user program guide equipment.

92. The interactive television program guide system defined in claim 80 wherein the subset of the interactive television program guide capabilities includes volume control.



93. The interactive television program guide system defined in claim 80 wherein the subset of the interactive television program guide capabilities includes mute.

94. The interactive television program guide system defined in claim 80 wherein the subset of the interactive television program guide capabilities includes the capability to provide the user with program reminders.

95. The interactive television program guide system defined in claim 94 wherein the capability to provide the user program reminders includes the capability to provide the user with program reminders that include an automatic tune option.

96. The interactive television program guide system defined in claim 94 wherein the capability to provide the user with program reminders includes the capability to provide the user with an opportunity to toggle between several program reminders.

97. The interactive television program guide system defined in claim 80 wherein the subset of the interactive television program guide capabilities provided to the user includes parental control.

98. The interactive television program guide system defined in claim 97 wherein the parental control capability includes the ability to prevent the viewing device tuner from tuning to parentally prohibited programs and channels.

99. The interactive television program guide system defined in claim 97 wherein the parental control capability includes requiring that a personal identification number be provided to the interactive television program guide before one of the parentally prohibited programs and channels can be displayed.

100. The interactive television program guide system defined in claim 97 wherein the user program guide equipment having a numeric display and wherein the parental control capability includes the capability to display user feedback on the numeric display of the user program guide equipment.

101. The interactive television program guide system defined in claim 80 wherein the subset of the interactive television program guide capabilities includes the capability to prevent the viewing device from tuning to channels that the viewing device tuner cannot decode.

102. The interactive television program guide system defined in claim 80 wherein the viewing device tuner is set to the previously selected channel when the interactive television program guide routes the raw signal to the viewing device.

103. The interactive television program guide system defined in claim 80 wherein the user program guide equipment includes a user program guide equipment tuner and wherein when the viewing device tuner is set to a previously selected channel the interactive television program guide sets the user program guide equipment tuner to the same channel the viewing device tuner was set prior

to the interactive television program guide routing a processed signal to the viewing device.

104. The interactive television program guide system defined in claim 80 wherein the interactive television program guide provides a processed signal to the recording device at the same time that the raw signal is provided to the viewing device.

105. The interactive television program guide system defined in claim 104 wherein the recording device volume is optimally set for the recording process by the interactive television program guide.

106. The interactive television program guide system defined in claim 104 wherein on-screen graphics are prevented from being transmitted as part of the processed signal.

107. The interactive television program guide system defined in claim 1 wherein the recording device includes a recording device tuner and wherein the interactive program guide controls the tuner in the recording device.

108. The interactive television program guide system defined in claim 107 further comprising a switch wherein when the recording device tuner is unable to decode a user-requested television program the interactive television program guide sends commands to the switch that cause the switch to route a processed signal to the recording device.

109. The interactive television program guide system defined in claim 107 wherein the interactive television program guide controls the recording device by sending commands to the recording device.

110. The interactive television program guide system defined in claim 109 further comprising an infrared transmitter wherein commands sent to the recording device are sent by the infrared transmitter in the form of infrared signals.

111. The interactive television program guide system defined in claim 109 further comprising a serial bus wherein the commands to the recording device are sent via the serial bus.

112. The interactive television program guide system defined in claim 109 wherein when the recording device tuner is able to decode a user-requested television program the interactive television program guide routes the raw signal to the recording device and the user has access to all capabilities of the interactive television program guide during the recording process.

113. The interactive television program guide system defined in claim 1 wherein the user program guide equipment includes a first tuner and a second tuner, and wherein the interactive program guide controls the first tuner and the second tuner.

114. The interactive television program guide system defined in claim 113 wherein the first tuner has a corresponding dedicated first output and the second tuner has a corresponding dedicated second output and wherein the

dedicated first output is coupled to the recording device and the dedicated second output is coupled to the viewing device so that the interactive television program guide always uses the first tuner to record a select program and always uses the second tuner to view a selected program.

115. The interactive television program guide system defined in claim 113 further comprising a switch, wherein the first tuner has a corresponding first output and the second tuner has a corresponding second output and wherein the interactive television program guide controls the switch so that the first output is coupled to either the viewing device or the recording device and the second output is coupled to either the viewing device or the recording device so that the either tuner can be used for the viewing and recording functions.

116. A television program guide system in which an interactive television program guide is implemented on user television equipment having a first tuner and a second tuner each of which has an output, wherein the output of the first tuner is coupled to a recording device and the output of the second tuner is coupled to a display device, comprising:

means for providing a user with an option to select a program to be recorded using the interactive television program guide; and

means for directing the output of the first tuner to the display device and the output of the second tuner to the recording device at the start of the selected program using the interactive television program guide, so that the program selected using the interactive television program guide is recorded with the recording device while

another program is simultaneously displayed on the display device.

117. The television program guide system defined in claim 116 wherein the recording device is a videocassette recorder.

118. The television program guide system defined in claim 116 wherein the display device is a television.

119. A television program guide system in which an interactive television program guide is implemented on user television equipment having a first tuner and a second tuner each of which has an output, comprising:

means for providing a user with an option to select a program to be recorded using the interactive television program guide;

means for directing the output of the first tuner and the output of the second tuner between a recording device and a display device at the start of the selected program using the interactive television program guide, so that the program selected using the interactive television program guide is recorded with the recording device while another program is simultaneously displayed on the display device; and

means for switching the output of the first tuner and the output of the second tuner using the interactive television program guide, wherein the output of the first tuner may be directed to the display device and the output of the second tuner may be directed to the recording device and wherein the output of the first tuner may be directed to the recording device and the output of the second tuner may be directed at the display device.

120. The television program guide system defined in claim 119 wherein the recording device is a videocassette recorder.

121. The television program guide system defined in claim 119 wherein the display device is a television.

122. The television program guide system defined in claim 119, further comprising means for using the interactive television program guide to provide the user with an option to cancel recording of the selected program so that the system can process a secondary function request.

123. The television program guide system defined in claim 119, further comprising means for using the interactive television program guide to provide the user with an option to cancel current use of a secondary function so that the selected program can be recorded with the recording device.

124. A television program guide system in which an interactive television program guide is implemented on user television equipment having a tuner and an RF bypass switch that are coupled to a recording device and a display device, comprising:

means for providing a user with an option to select a program to be recorded using the interactive television program guide; and

means for directing the output of the tuner and the output of the RF bypass switch between the recording device and the display device using the interactive television program guide, so that one program

is displayed on the display device while another program is simultaneously recorded on the recording device.

125. The television program guide system defined in claim 124, wherein the RF bypass switch has two audio/video signal inputs and a single audio/video output.

126. The television program guide system defined in claim 125, wherein the recording device is a videocassette recorder and the display device is a television and wherein the output of the RF bypass switch is coupled to the television, the output of the tuner is coupled to the videocassette recorder, and the output of the videocassette recorder is coupled to the RF bypass switch.

127. The television program guide system defined in claim 126, further comprising means for using the interactive television program guide to provide the user with an option to select a last channel viewed to be displayed on the display device without interrupting the recording of the selected program on the videocassette recorder.

128. The television program guide system defined in claim 126, further comprising means for using the interactive television program guide to provide the user with an option to use favorite channel features in the interactive television program guide without interrupting the recording of the selected program on the videocassette recorder.

129. The television program guide system defined in claim 126, further comprising means for using the



interactive television program guide system to provide the user with an ability to adjust the volume of the television without interrupting the recording of the selected program on the videocassette recorder.

130. The television program guide system defined in claim 126, further comprising means for using the interactive television program guide to respond to a pre-set channel reminder by automatically tuning the television to a pre-selected channel associated with the pre-set channel reminder without interrupting the recording of the selected program on the videocassette recorder.

131. The television program guide system defined in claim 126, further comprising means for using the interactive television program guide to provide the user with an option to toggle between a plurality of pre-set channel reminders by using pre-defined keys on a remote control unit without interrupting the recording of the selected program.

132. The television program guide system defined in claim 126, further comprising means for using the interactive television program guide to provide the user with an option of controlling access to specific programs by requiring the user to enter a personal identification number into the program guide system by remote control without interrupting the recording of the selected program.

133. The television program guide system defined in claim 132, wherein the user television equipment comprises a set-top box and wherein the prompt for the personal identification number appears on a front-panel display of the set-top box.

134. The television program guide system defined in claim 126, wherein the user television equipment comprises a set-top box, the system further comprising means for using the interactive television program guide to provide the user with an ability to display a channel number on a front-panel of the set-top box by entering commands into a remote control device without interrupting the recording of the selected program.

135. The television program guide system defined in claim 126, further comprising means for preventing the user from accessing a channel that carries a scrambled signal for display on the television.

136. The television program guide system defined in claim 125, wherein the recording device is a videocassette recorder and the display device is a television and wherein the output of the RF bypass switch is coupled to the videocassette recorder and the output of the tuner is coupled to the television.

137. The television program guide system defined in claim 124, wherein the RF bypass switch has two outputs and two audio/video signal inputs one of which receives a processed television signal and one of which receives a unprocessed television signal.

138. The television program guide system defined in claim 137, wherein the RF bypass switch has two positions.

139. The television program guide system defined in claim 138, wherein one of the two positions allows the two audio/video signal inputs to pass directly through the

RF bypass switch to the two outputs and the other one of the two positions allows the two audio/video signal inputs to be switched, so that using the interactive television program guide the unprocessed television signal can be switched to either of the two outputs and the processed television signal can be switched to either of the two television outputs.

140. The television program guide system defined in claim 137, wherein the RF bypass switch has three switching positions.

141. The television program guide system defined in claim 138, wherein one of the three positions allows the processed television signal to be directed to both of the two outputs and another of the three positions allows the two audio/video signal inputs to pass directly through the RF bypass switch to respective ones of the outputs and the other one of the three positions allows the audio/video inputs to be switched so that using the interactive television program guide the unprocessed television signal can be switched to either of the two outputs and the processed television signal can be switched to either of the two outputs.

142. A television program guide system comprising:

user television equipment on which an interactive television program guide is implemented, the user television equipment having a first tuner and a second tuner each of which has an output, wherein the output of the first tuner is coupled to a recording device and the output of the second tuner is coupled to a display device, wherein:

the interactive television program guide is configured to provide a user with an option to select a program to be recorded; and

the interactive television program guide is configured to direct the output of the first tuner to the display device and the output of the second tuner to the recording device at the start of the selected program, so that the program selected using the interactive television program guide is recorded with the recording device while another program is simultaneously displayed on the display device.

143. The television program guide system defined in claim 142 wherein the recording device is a videocassette recorder.

144. The television program guide system defined in claim 142 wherein the display device is a television.

145. A television program guide system comprising:

user television equipment on which an interactive television program guide is implemented, the user television equipment having a first tuner and a second tuner each of which has an output, wherein:

the interactive television program guide is configured to provide a user with an option to select a program to be recorded; and

the interactive television program guide is configured to direct the output of the first tuner and the output of the second tuner between a recording device and a display device at the start of the selected program, so that the program selected using the interactive television program guide is recorded with the recording device while

another program is simultaneously displayed on the display device; and

a switch for switching the output of the first tuner and the output of the second tuner using the interactive television program guide, wherein the output of the first tuner may be directed to the display device and the output of the second tuner may be directed to the recording device and wherein the output of the first tuner may be directed to the recording device and the output of the second tuner may be directed at the display device.

146. The television program guide system defined in claim 145 wherein the recording device is a videocassette recorder.

147. The television program guide system defined in claim 145 wherein the display device is a television.

148. The television program guide system defined in claim 145, further comprising the interactive television program guide configured to provide the user with an option to cancel recording of the selected program so that the system can process a secondary function request.

149. The television program guide system defined in claim 145, further comprising the interactive television program guide configured to provide the user with an option to cancel current use of a secondary function so that the selected program can be recorded with the recording device.

150. A television program guide system comprising:

on user television equipment on which an interactive television program guide is implemented, the

user television equipment having a tuner and an RF bypass switch that are coupled to a recording device and a display device, wherein:

the interactive television program guide is configured to provide a user with an option to select a program to be recorded; and

the interactive television program guide is configured to switch the output of the tuner and the output of the RF bypass switch between the recording device and the display device using the interactive television program guide, so that one program is displayed on the display device while another program is simultaneously recorded on the recording device.

151. The television program guide system defined in claim 150, wherein the RF bypass switch has two audio/video signal inputs and a single audio/video output.

152. The television program guide system defined in claim 151, wherein the recording device is a videocassette recorder and the display device is a television and wherein the output of the RF bypass switch is coupled to the television, the output of the tuner is coupled to the videocassette recorder, and the output of the videocassette recorder is coupled to the RF bypass switch.

153. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to provide the user with an option to select a last channel viewed for display on the display device without interrupting the recording of the selected program on the recording device.

154. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to provide the user with an option to use favorite channel features in the interactive television program guide without interrupting the recording of the selected program on the recording device.

155. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to provide the user with an ability to adjust the volume of the television without interrupting the recording of the selected program on the recording device.

156. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to respond to a pre-set channel reminder by automatically tuning the television to a pre-selected channel associated with the pre-set channel reminder without interrupting the recording of the selected program on the recording device.

157. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to provide the user with an option to toggle between a plurality of pre-set channel reminders by using pre-defined keys on a remote control unit without interrupting the recording of the selected program.

158. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to provide the user with an option of controlling access to specific programs by requiring the user to enter a personal identification number into the

program guide system by remote control without interrupting the recording of the selected program.

159. The television program guide system defined in claim 158, wherein the user television equipment comprises a set-top box and wherein the prompt for the personal identification number appears on a front-panel display of the set-top box.

160. The television program guide system defined in claim 152, wherein the user television equipment comprises a set-top box and wherein the interactive television program guide is configured to provide the user with an ability to display a channel number on a front-panel of the set-top box by entering commands into a remote control device without interrupting the recording of the selected program.

161. The television program guide system defined in claim 152, wherein the interactive television program guide is configured to prevent the user from accessing a channel that carries a scrambled signal for display on the television.

162. The television program guide system defined in claim 151, wherein the recording device is a videocassette recorder and the display device is a television and wherein the output of the RF bypass switch is coupled to the videocassette recorder and the output of the tuner is coupled to the television.

163. The television program guide system defined in claim 150, wherein the RF bypass switch has two outputs and two audio/video signal inputs one of which receives a



processed television signal and one of which receives a unprocessed television signal.

164. The television program guide system defined in claim 163, wherein the RF bypass switch has two positions.

165. The television program guide system defined in claim 164, wherein one of the two positions allows the two audio/video signal inputs to pass directly through the RF bypass switch to the two outputs and the other one of the two positions allows the two audio/video signal inputs to be switched, so that using the interactive television program guide the unprocessed television signal can be directed to either of the two outputs and the processed television signal can be switched to either of the two television outputs.

166. The television program guide system defined in claim 163, wherein the RF bypass switch has three switching positions.

167. The television program guide system defined in claim 166, wherein one of the three positions allows the processed television signal to be directed to both of the two outputs and another of the three positions allows the two audio/video signal inputs to pass directly through the RF bypass switch to respective ones of the outputs and the other one of the three positions allows the audio/video inputs to be switched so that using the interactive television program guide the unprocessed television signal can be switched to either of the two outputs and the processed television signal can be switched to either of the two outputs.

168. A method for using an interactive television program guide that is implemented on user television equipment having two tuners each of which has an output, the outputs of the two tuners being coupled to a recording device and a display device, the method comprising:

providing a user with an option to select a program to be recorded using the interactive television program guide; and

directing the output of the first tuner to the display device and the output of the second tuner to the recording device at the start of the selected program using the interactive television program guide, so that the selected program is recorded with the recording device while another program is simultaneously displayed on the display device.

169. The method defined in claim 168 wherein the recording device is a videocassette recorder.

170. The method defined in claim 168 wherein the display device is a television.

171. A method for using an interactive television program guide that is implemented on user television equipment having a first tuner and a second tuner each of which has an output, the method comprising:

providing a user with an option to select a program to be recorded using the interactive television program guide;

directing the output of the first tuner and the output of the second tuner between a recording device and a display device at the start of the selected program using the interactive television program guide, so that the program selected using the interactive television program

guide is recorded with the recording device while another program is simultaneously displayed on the display device; and

switching the output of the first tuner and the output of the second tuner using the interactive television program guide, wherein the output of the first tuner may be directed to the display device and the output of the second tuner may be directed to the recording device and wherein the output of the first tuner may be directed to the recording device and the output of the second tuner may be directed at the display device.

172. The method defined in claim 171 wherein the recording device is a videocassette recorder.

173. The method defined in claim 171 wherein the display device is a television.

174. The method defined in claim 171, further comprising using the interactive television program guide to provide the user with an option to cancel recording the selected program so that the system can process a secondary function request.

175. The method defined in claim 171, further comprising using the interactive television program guide to provide the user with an option to cancel current use of a secondary function so that the selected program can be recorded with the recording device.

176. A method for using an interactive television program guide that is implemented on user television equipment having a single tuner and an RF bypass switch

that are coupled to a recording device and a display device, the method comprising:

providing a user with an option to select a program to be recorded using an interactive television program guide; and

directing the outputs of the single tuner and the RF bypass switch between the recording device and the display device using said interactive television program guide, so that one program is displayed on the display device while another program is simultaneously recorded on the recording device.

177. The method defined in claim 176, wherein said RF bypass switch has two audio/video signal inputs and a single audio/video output.

178. The method defined in claim 177, wherein the recording device is a videocassette recorder and the display device is a television and wherein the output of the RF bypass switch is directed to the television and the output of the tuner is directed to the videocassette recorder.

179. The method defined in claim 178, further comprising using the interactive television program guide to provide the user with an option to select a last channel viewed to be displayed on the display device without interrupting the recording of the selected program on the videocassette recorder.

180. The method defined in claim 178, further comprising using the interactive television program guide to provide the user with an option to use favorite channel features in the interactive television program guide

without interrupting the recording of the selected program on the videocassette recorder.

181. The method defined in claim 178, further comprising using the interactive television program guide system to provide the user with an ability to adjust the volume of the television without interrupting the recording of the selected program on the videocassette recorder.

182. The method defined in claim 178, further comprising using the interactive television program guide to respond to a pre-set channel reminder by automatically tuning the television to a pre-selected channel associated with the pre-set channel reminder without interrupting the recording of the selected program on the videocassette recorder.

183. The method defined in claim 178, further comprising using the interactive television program guide to provide the user with an option to toggle between a plurality of pre-set channel reminders by using pre-defined keys on a remote control unit without interrupting the recording of the selected program.

184. The method defined in claim 178, further comprising using the interactive television program guide to provide the user with an option of controlling access to specific programs by requiring the user to enter a personal identification number into the program guide system by remote control without interrupting the recording of the selected program.

185. The method defined in claim 184, wherein the user television equipment comprises a set-top box and the

prompt for the personal identification number appears on a front-panel display of the set-top box.

186. The method defined in claim 178, wherein the user television equipment comprises a set-top box, the method further comprising using the interactive television program guide to provide the user with an ability to display a channel number on a front-panel of the set-top box by entering commands into a remote control device without interrupting the recording of the selected program.

187. The method defined in claim 178, further comprises preventing the user from accessing a channel that carries a scrambled signal for display on the television.

188. The method defined in claim 177, wherein the recording device is a videocassette recorder and the display device is a television and wherein the output of the RF bypass switch is coupled to the videocassette recorder and the output of the tuner is coupled to the television.

189. The method defined in claim 176, wherein the RF bypass switch has two audio/video signal inputs one of which receives a processed television signal and one of which receives a unprocessed television signal and two outputs.

190. The method defined in claim 189, wherein the RF bypass switch has two positions.

191. The method defined in claim 190, wherein one of the two positions allows the two audio/video signal inputs to pass directly through the RF bypass switch to

said two outputs and the other one of the two positions allows the two audio/video signal inputs to be switched, so that using the interactive television program guide the unprocessed television signal can be switched to either of the two outputs and the processed television signal can be switched to either of the two television outputs.

192. The method defined in claim 189, wherein the RF bypass switch has three switching positions.

193. The method defined in claim 192, wherein one of the three positions allows the processed television signal to be directed to both of the two outputs and another of the three positions allows the two audio/video signal inputs to pass directly through the RF bypass switch to respective ones of the outputs and the other one of the three positions allows the audio/video inputs to be switched so that using the interactive television program guide the unprocessed television signal can be switched to either of the two outputs and the processed television signal can be switched to either of the two outputs.

194. An interactive television program guide system having a videocassette recorder and a television that has a regular television input, the system comprising:

- a set-top box on which an interactive television program guide is implemented, the set-top box having a first tuner and a second tuner that receive a television signal and that provide corresponding first and second processed television signals; and

- an infrared transmitter for transmitting command signals from the interactive television program guide to the videocassette recorder so that the interactive

television program guide can direct the videocassette recorder to record; wherein:

the interactive television program guide provides a user with an opportunity to select a television program for recording;

the first tuner is tuned at a given time by the program guide so that the first processed television signal corresponds to a first channel;

the first processed television signal is provided to the regular television input and television programming for the first channel is displayed on the television;

prior to the time for recording the second tuner is tuned by the interactive television program guide so that the second processed television signal corresponds to a second channel on which the selected program will be broadcast;

the second processed television signal is provided to the videocassette recorder; and

at the time the recording is to begin the interactive program guide commands the infrared transmitter to send signals to the videocassette recorder to direct it to begin recording the selected program.

195. An interactive television program guide system having a videocassette recorder and a television that has a regular television input and a picture-in-picture television input, the system comprising:

a set-top box on which an interactive television program guide is implemented, the set-top box having a first tuner and a second tuner that receive a television signal and that provide corresponding first and second processed television signals;



switching circuitry configured to receive the first and second processed television signals and to provide them to the television and to the videocassette recorder and configured to receive the program guide command signals from the interactive television program guide; and

an infrared transmitter for transmitting command signals from the interactive television program guide to the videocassette recorder so that the interactive television program guide can direct the videocassette recorder to record; wherein:

the interactive television program guide provides the user with an opportunity to select a television program for recording;

the first tuner is tuned at a given time by the interactive television program guide so that the first processed television signal corresponds to a first channel;

the switching circuitry is switched by the interactive television program guide so that the first processed television signal is provided to the regular television input and television programming for the first channel is displayed on the television;

the second tuner is tuned by the interactive television program guide so that the second processed television signal corresponds to a second channel;

the switching circuitry is switched by the interactive television program guide so that the second processed television signal is provided to the Picture-In-Picture television input for the second channel to be displayed on the television using a Picture-in-Picture function; and

prior to the given time for recording the interactive television program guide determines that both the first and second tuner are in use and provides the user

with an opportunity to either direct the interactive television program guide to tune the tuner that is directed to the Picture-In-Picture television input to the appropriate channel for recording the selected television program or to cancel the recording of the selected television program and continue the Picture-In-Picture function.

196. An interactive television program guide system having a videocassette recorder and a television that has a regular television input, the system comprising:

- a set-top box on which an interactive television program guide is implemented, the set-top box having a tuner that receives a television signal and provides corresponding processed and unprocessed television signals;

- an RF bypass switch is configured to receive processed and unprocessed television signals to provide the processed and unprocessed television signals to the television and configured to receive the program guide command signals from the interactive television program guide;

- an infrared transmitter for transmitting command signals from the interactive television program guide to the videocassette recorder so that the interactive television program guide can direct the videocassette recorder to record and to tune the television; wherein:

- the interactive television program guide provides the user with an opportunity to select a television program for recording;

- the tuner is tuned at a given time by the interactive television program guide so that the processed television signal corresponds to a first channel and the processed signal is provided to the videocassette recorder;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the unprocessed television signal is provided to the regular television input and television programming for a second channel is displayed on the television;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the processed television signal is provided to the regular television input and television programming for the first channel is displayed on the television; and

at any given time the interactive television program guide commands the infrared transmitter to send signals to the television that tune the television to a desired channel;

at the time the selected program is to begin the interactive television program guide sends commands by the infrared transmitter that direct the videocassette recorder to begin recording.

197. An interactive television program guide system having a videocassette recorder and a television having a regular television input, the system comprising:

a set-top box on which an interactive television program guide is implemented, the set-top box having a tuner that receives a television signal and provides corresponding processed and unprocessed television signals;

an RF bypass switch is configured to receive the unprocessed television signals and provide the unprocessed television signals to the videocassette recorder and configured to receive the program guide command signals from the interactive television program guide;

an infrared transmitter for transmitting command signals from the interactive television program guide to the videocassette recorder so that the interactive television program guide can tune the videocassette recorder and direct it to record; wherein:

the interactive television program guide provides the user with an opportunity to select a television program for recording;

the tuner is tuned at a given time by the interactive television program guide so that the processed television signal corresponds to a first channel and the processed television signal is provided to the television;

the RF bypass switch circuitry is switched by the interactive television program guide so that the unprocessed television signal is provided to the videocassette recorder;

at the time the selected program is to begin the interactive television program guide sends commands by the infrared transmitter that direct the videocassette recorder to tune to a channel on which the selected program is to be broadcast; and

at the time the selected program is to begin the interactive television program guide sends commands by the infrared transmitter that direct the videocassette recorder to begin recording.

198. An interactive television program guide system having a videocassette recorder and a television having a regular television input, the system comprising:

a set-top box on which an interactive television program guide is implemented, the set-top box having a tuner that receives a television signal and that provides corresponding processed and unprocessed television signals;

the RF bypass switch is configured to receive processed and unprocessed television signals and to provide processed and unprocessed television signals to the television and the videocassette recorder and configured to receive the program guide command signals from the interactive television program guide;

an infrared transmitter for transmitting command signals from the interactive television program guide to the videocassette recorder so that the interactive television program guide can direct the videocassette recorder to record and to tune the videocassette recorder and television; wherein:

the interactive television program guide provides the user with an opportunity to select a television program for recording;

the tuner is tuned at a given time by the interactive television program guide so that the processed television signal corresponds to a first channel and the processed signal is provided to the RF bypass switch;

the videocassette recorder is tuned at any given time by the interactive television program guide through the infrared transmitter so that the unprocessed television signal corresponds to a second channel and the unprocessed television signal is provided to the RF bypass switch;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the processed television signal is provided to the regular television input and television programming for the first channel is displayed on the television and the unprocessed television signal corresponding to the second channel is provided to the videocassette recorder;

the television is tuned at any given time by the interactive television program guide through the

infrared transmitter so that the unprocessed television signal corresponds to a second channel and the unprocessed television signal is provided to the RF bypass switch;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the processed television signal and television programming for the first channel is provided to the videocassette recorder and the unprocessed television signal and the television programming for the second channel is provided to the regular television input and television programming is displayed; and

at the time the recording is to begin the interactive television program guide commands the infrared transmitter to send signals to the videocassette recorder to tune it to a desired channel and direct it to begin recording the selected program.

199. An interactive television program guide system having a videocassette recorder and a television having a regular television input, the system comprising:

a set-top box on which an interactive television program guide is implemented, the set-top box having a tuner that receives a television signal and that provides corresponding processed television signals;

the RF bypass switch is configured to receive unprocessed and processed television signals and to provide unprocessed and processed television signals to the television and the videocassette recorder and configured to receive the program guide command signals from the interactive television program guide;

an infrared transmitter for transmitting command signals from the interactive television program guide to the videocassette recorder so that the interactive television program guide can direct the videocassette

recorder to record and to tune the videocassette recorder and television; wherein:

the interactive television program guide provides the user with an opportunity to select a television program for recording;

the tuner is tuned at a given time by the interactive television program guide so that the processed television signal corresponds to a first channel and the processed signal is provided to the RF bypass switch;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the processed television signal is provided to both the regular television input and television programming for the first channel is displayed on the television and the videocassette recorder;

the videocassette recorder is tuned at any given time by the interactive television program guide through the infrared transmitter so that the unprocessed television signal corresponds to a second channel and the unprocessed television signal is provided to the RF bypass switch;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the processed television signal is provided to the regular television input and television programming for the first channel is displayed on the television and the unprocessed television signal corresponding to the second channel is provided to the videocassette recorder;

the television is tuned at any given time by the interactive television program guide through the infrared transmitter so that the unprocessed television signal corresponds to a second channel and the unprocessed television signal is provided to the RF bypass switch;

the RF bypass switch circuitry may be switched by the interactive television program guide so that the processed television signal corresponding to the first channel is provided to the videocassette recorder and the unprocessed television signal is provided to the regular television input and television programming for the second channel is displayed on the television; and

at the time the recording is to begin the interactive television program guide commands the infrared transmitter to send signals to the videocassette recorder to direct it to begin recording the selected program.